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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,685

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Egon Luther

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20999 7590 09/29/2010  
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EXAMINER

LIPITZ, JEFFREY BRIAN

ART UNIT

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3769

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,685	<b>Applicant(s)</b> LUTHER ET AL.	
	<b>Examiner</b> JEFFREY B. LIPITZ	<b>Art Unit</b> 3769	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-16, 18 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-16, 18 and 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/12/2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

The drawings were received on July 12, 2010. These drawings are accepted.

### ***Response to Arguments***

Applicant's arguments with respect to the 112 1st rejection of claim 16 have been fully considered and are persuasive. That rejection has been withdrawn.

Applicant's arguments with respect to the prior art have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added language is not supported by the original disclosure, and it is NOT inherent with respect to the language of the specification. Applicant makes one mention of an observation system, which for example could be an observation microscope of a slit lamp (Paragraph [0027]). This statement implies that other observation systems could be used, and does not specify the type of microscope used. Applicant's invention is clearly not intended to be

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contingent on the optics described in this claim. Applicant does have support for optical elements in the drawings/specification. These optical elements can and should be used to describe the positioning of the beams.

### ***Claim Objections***

Claim 15 is objected to because of the following informalities: "The monitoring unit" has no antecedent basis in the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13, 15, 18, 21 and 23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Levine (20030007124).

Regarding claim 13, Applicant recites a means for generating patterns and a means for coupling. The former recitation is NOT interpreted under 112 6<sup>th</sup> paragraph because it is sufficiently defined by structure (e.g. optical filters, diaphragms and or optoelectronic modulators); however, latter recitation is interpreted under 112 6<sup>th</sup> paragraph. Accordingly, per Applicant's specification, the means coupling must be a beamsplitter or a functional equivalent.

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Levine teaches units comprising a light or illumination source (207,225; Figure 2a), a means for generating patterns or profiles, which Examiner interprets as the diaphragm (243) OR the wavefront analyzer (213; paragraph [0091]). A diaphragm inherently alters at least a profile of the incident beam, which the wavefront analyzer generates patterns via dot pattern mask (307; [paragraph [0091]). Levine also teaches a means for coupling or a beam splitter (239) and an objective lens (241; Figure 2). The objective is located downstream of the beam splitter, and Levine illustrates the parallel beams and the convergent beams, as claimed. Furthermore, Levine teaches the use of spectral filters (Paragraphs [0010] and [0073]) and diaphragms to control illumination of the retina (paragraph [0074]). If the wavefront analyzer (213) is interpreted as the means for generating, then the beam splitter (249) can additionally be interpreted as the means for coupling.

Regarding claims 16 and 18, Levine is silent to a particular wavelength of light; however, he does teach using a xenon or krypton light source (Paragraph [0058]). Xenon sources emit in the UV range, which Examiner interprets as being around 365 nm, since Applicant has provided no metric by which to limit “around”. Krypton sources emit in the mid-600 nm range, which using the same rationale is around 690 nm.

Regarding claim 21, Levine teaches using beam splitters (249 or 263) to couple an observation image to a view finder (227; Figure 2) for direct observation (Paragraph [0085]). The beam splitter (249) must separate the light based in part on wavelength, since infrared light is produced by the source (225), while source (207) uses a xenon or krypton source, as discussed in the rejection of claims 16 and 18, supra. Furthermore,

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it well known to a skilled artisan to use a beamsplitter to separate light based on wavelength. The recitation concerning protecting the observer has no patentable significance, since there is no metric by which to limit the spectra, intensity or any other property of the light.

Regarding claim 23, Levine teaches using a fixation target to track movements of the eye, which enables tracking of the spot patterns (paragraphs [0066], [0090], [0096] and [0144]).

Regarding claims 24-26, Levine teaches using the unit in combination with a wavefront measuring unit or wavefront sensor based adaptive optical subsystem (203; Figure 2). This unit is modular (Summary of Invention and paragraph [0086]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levine.

Regarding claim 22, Levine teaches that the light source teaches does NOT teach that the illumination source (11) is not arranged within the illumination unit. However, making an element separate is not of innovation. It would have been an obvious matter of design choice to make the illumination source separate from the illumination unit or to make the illumination unit a modular unit for retrofit installation into

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an ophthalmic instrument, since such modifications would have involved making the parts separately or portable. Making a part separate, if it is desirable, is generally recognized as being within the level of ordinary skill in the art. In re Dulberg, 289 F.2d 522, 129 USPQ 348,349 (CCPA 1961 ). Furthermore, Applicant admits that positioning light sources outside of a main housing, and using a light guide or conductor to transmit the light to a main housing is common to one of ordinary skill in the art (Applicant's Arguments/Remarks: Pages 10- 11).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levine as applied to claim 13 above, and further in view of Sumiya (US 6,585,723 B1).

Regarding claims 14 and 15, Levine teaches providing a computer for recording patterns (Paragraphs [0060] and [0102]), and providing interfaces such as connectors, to send data to external devices for processing, analysis, etc. (Paragraph [0148]).

However, although Levine intends to use his invention with an ablative laser (paragraph [0033]), that configuration is not discussed. Attention is directed to Sumiya who teaches using an ablative laser to correct detected aberrations (Summary of the invention). Sumiya teaches a computer or monitoring unit (8) comprised of an input unit (41), a processing unit (42), a display unit (43), and an output unit (44). The processing unit (42) processes signals sent from the photodetector (23), signals sent from the corneal shape measurement optical system (10) and the inputted irradiation conditions in order to obtain ablation data. The data processed by the processing unit (42) is sent to the control system (40). Processed data may also be sent to the display unit (43). In

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addition to controlling the processing unit (42) and the control system (40), the computer (8) functions at least at the level of a basic computer, which can store or record ablation data or radiation dosage, irradiation patterns and positions. Sumiya specifically mentions that it has more than one interface for transferring data (a printer and a floppy disc drive; Column 3, Lines 21-24; Column 5, Lines 35-60). It would have been obvious to a skilled artisan to include the monitoring device of Sumiya with the invention of Levine, because Levine's device is intended to be used with corneal surgical apparatuses. Therefore, it would have been advantageous to provide a monitoring system that monitors all aspects of the wavefront measurement, image capture/processing and the surgical procedure in order to reduce transfer of data and redundant elements (e.g. computers).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY B. LIPITZ whose telephone number is (571)270-5612. The examiner can normally be reached on Monday to Thursday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry M. Johnson III can be reached on (571)272-4768. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEFFREY B LIPITZ/  
Examiner, Art Unit 3769

/Henry M. Johnson, III/  
Supervisory Patent Examiner, Art  
Unit 3769

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